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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BARBEE, MANUEL L	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary	Application No.	Applicant(s)	
	10/646,719	NEUMAN ET AL.	
	Examiner	Art Unit	
	Manuel L. Barbee	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al. (US Patent No. 4,328,577) in view of Sebaa et al. (WESCON/94. 'Idea/Microelectronics'. Conference).

With regard to a switching device with multiple input and output ports and a testing output port, as shown in claim 1, Abbott et al. teach a multiplexer demultiplexer system with a monitor connectable to inputs or outputs for monitoring the data path (col. 1, lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1). With regard to each input port being connectable to a single one of the output ports, as shown in claim 1, Abbott et al. teach transmitting a signal from a input port and receiving the signal at a corresponding output port (Fig. 1, col. 3, lines 7-29). With regard to a separate testing output port configurable to couple to only one of the data-paths and a controller connectable to the switching device via the testing output port to connect to a selected data path and permit analysis of a data path, as shown in claim 1, Abbott et al. teach a monitor and controlling the monitor to monitor various signal paths for faults (col. 2, lines 54-63; col. 14, line 60 - col. 15, line 68; Figure 1, monitor 101). Abbott et al. teach a monitor that chooses one data entry point and choosing one channel of data from four channels of

data (col. 15, lines 24-35; col. 16, lines 1-13). Abbott et al. do not teach that the switching device is coupled to a video source, as shown in claim 1.

Sebaa et al. teach a video controller and testing a video card having a data path upon which the video data passes (page 542, Section 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor system, as taught by Abbott et al., to include a video source, as taught by Sebaa et al., because then the video data path would have been tested without disrupting operation (Sebaa et al., Abstract; Abbott et al. col. 1, lines 1-23).

Abbott et al. do not teach a cyclic redundancy checksum (CRC) port, CRC analysis or a CRC module, as shown in claims 3-5. Sebaa et al. teach CRC analysis in a test answer evaluator (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the muldem monitor, as taught by Abbott et al., to include CRC analysis, as taught by Sebaa et al., because then the video data path would have been checked for errors (Sebaa, page 542, Abstract, Section 1).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al. in view of Sebaa et al. as applied to claim 1 above, and further in view of Mann et al. (US Patent Application Publication 2001/0013104).

Abbott et al. and Sebaa et al. teach all the limitations of claim 1 upon which claim 2 depends. Neither Abbott et al. nor Sebaa et al. teach a video cross-bar device, as shown in claim 2. Mann et al. teach a cross-bar system for video (par. 85). It would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify the muldem system combination, as taught by Abbott et al. and Sebaa et al., to include a cross-bar system, as taught by Mann et al., because then a flexible method for routing video feeds would have been used (Mann et al. pars. 84-86).

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aagaard et al. (US Patent No. 3,928,730) in view of Abbott et al.

With regard to two switching devices both with multiple input and output ports and with the output ports of the first switching device connected to the input ports of the second switching device, as shown in claim 6, Aagaard et al. teach a matrix module switching network with three stages of switching devices (Fig. 1). With regard to each first input port being connectable to a single one of the first output ports, as shown in claim 6, Aagaard et al. teach connecting the inputs of a first switch to output connected to inputs of a second set of switches (Fig. 1, matrix stages A and B; Fig. 3, lines 28-47). Aagaard et al. do not teach a separate testing output port configurable to monitor one input or output port or data path, as shown in claim 6. Abbott et al. teach a monitor connectable to inputs or outputs for monitoring the data path (col. 1, lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1, monitor 101). Abbott et al. teach a monitor that chooses one data entry point and choosing one channel of data from four channels of data (col. 15, lines 24-35; col. 16, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard et al., to include a monitoring apparatus, as taught by Abbott et al., because then the system would have been automatically adjusted for failures and errors would have been detected (Abbott et al., col. 1, lines 6-37).

Aagaard et al. do not teach a data collection device, as shown in claim 7. Abbott et al. teach a monitor connectable to inputs or outputs for monitoring the data path (col., lines 5-41; col. 2, line 54 - col. 3, line 29; Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix switching network, as taught by Aagaard et al., to include a monitoring apparatus, as taught by Abbott et al., because then the system would have been automatically adjusted for failures and errors would have been detected (Abbott et al., col. 1, lines 6-37).

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aagaard et al. in view of Abbott et al. as applied to claims 6 and 7 above, and further in view of Sebaa et al.

Aagaard et al. and Abbott et al. teach all the limitations of claims 6 and 7 upon which claims 8 and 9 depend. Aagaard et al. and Abbott et al. do not teach a CRC module and CRC checking, as shown in claims 8 and 9. Sebaa et al. teach CRC analysis in a test answer evaluator (pages 542-543, Section 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the matrix network combination, as taught by Aagaard et al. and Abbott et al., to include CRC analysis, as taught by Sebaa et al., because then video data paths would have been checked for errors (Sebaa, page 542, Abstract, Section 1).

Allowable Subject Matter

6. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 17 January 2006 have been fully considered but they are not persuasive. Applicant states that Abbott et al. does not teach Applicants' recited features including a separate testing output port. Abbott et al. teach a monitor and controlling the monitor to monitor various signal paths for faults (col. 2, lines 54-63; col. 14, line 60 - col. 15, line 68; Figure 1, monitor 101). The monitor corresponds to the test output port and is separate from the other outputs of the switching device.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 571-272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mlb
February 27, 2006

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
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